

# BEST AVAILABLE COPY

## CLAIMS

1. An outer loop power control method performed in a radio communications system, the method comprising:
  - 5 determining that a plurality of different services are being communicated; performing a comparison with respect to the different services; and providing an inner loop power control performance target in a manner dependent upon the comparison.
- 10 2. A method according to claim 1, wherein the step of performing a comparison with respect to the different services comprises selecting one of the services; and the step of providing the inner loop power control performance target comprises providing the inner loop power control performance target of the selected service.
- 15 3. A method according to claim 2, wherein selecting one of the services comprises selecting the service which is the least delay tolerant service.
4. A method according to claim 2, wherein selecting one of the services is  
20 performed based upon a comparison of one or more quality of service characteristics or requirements of the services.
5. A method according to claim 2, wherein selecting one of the services comprises receiving an input from a user or operator specifying the service.

6. A method according to claim 1, further comprising:  
periodically calculating, for each of the services, a separate change to the  
current inner power loop performance target;  
wherein performing a comparison with respect to the different services  
5 comprises comparing the resulting respective current inner power loop  
performance target changes;  
identifying the largest of the resulting respective current inner power loop  
performance target changes; and  
changing the current inner power loop performance target by the amount  
10 of the identified largest resulting respective current inner power loop  
performance target changes to arrive at the inner loop power control  
performance target being provided.
7. A method according to claim 1, further comprising:  
15 periodically calculating, for each of the services, a separate new inner loop  
power control performance target value;  
wherein performing a comparison with respect to the different services  
comprises comparing the resulting respective inner loop power control  
performance target values;  
20 identifying the highest inner loop power control performance target value  
from among the resulting respective inner loop power control performance  
target values; and  
using the identified highest inner loop power control performance target  
value as the inner loop power control performance target being provided.

8. A method according to claim 7, further comprising:  
determining that one of the resulting respective inner loop power control performance target values differs from the resulting respective inner loop power control performance target value of one or more of the other services by more  
5 than a predetermined threshold for more than a predetermined time responsive thereto, adjusting rate matching parameters of one or more of the services to bring the differing respective inner loop power control performance target value closer to the resulting respective inner loop power control performance target values of the one or more other services.
- 10 9. A method according to any of claims 1 to 8, wherein the inner loop power control performance target is a signal to interference ratio, SIR, target.
10. A method according to any of claims 1 to 9, wherein the radio  
15 communication system is a cellular radio communications system.
11. A method according to claim 10, wherein the cellular radio communications system is a UMTS system.
- 20 12. A storage medium storing processor-implementable instructions for controlling a processor to carry out the method of any of claims 1 to 11.
13. Apparatus for performing an outer loop power control method in a radio communications system, comprising:

means for determining that a plurality of different services are being communicated;

means for performing a comparison with respect to the different services; and

5 means for providing an inner loop power control performance target in a manner dependent upon the comparison.

14. Apparatus according to claim 13, wherein the means for performing a comparison with respect to the different services comprises means for selecting  
10 one of the services; and the means for providing the inner loop power control performance target comprises means for providing the inner loop power control performance target of the selected service.

15. Apparatus according to claim 14, wherein the means for selecting one of  
15 the services comprises means for selecting the service which is the least delay tolerant service.

16. Apparatus according to claim 14, wherein the means for selecting one of  
20 the services comprises means for basing the selection upon a comparison of one or more quality of service characteristics or requirements of the services.

17. Apparatus according to claim 14, wherein the means for selecting one of  
the services comprises means for receiving an input from a user or operator specifying the service.

18. Apparatus according to claim 13, further comprising:

means for periodically calculating, for each of the services, a separate change to the current inner power loop performance target;

5 wherein the means for performing a comparison with respect to the different services comprises means for comparing the resulting respective current inner power loop performance target changes;

means for identifying the largest of the resulting respective current inner power loop performance target changes; and

10 means for changing the current inner power loop performance target by the amount of the identified largest resulting respective current inner power loop performance target changes to arrive at the inner loop power control performance target being provided.

15 19. Apparatus according to claim 13, further comprising:

means for periodically calculating, for each of the services, a separate new inner loop power control performance target value;

20 wherein the means for performing a comparison with respect to the different services comprises means for comparing the resulting respective inner loop power control performance target values;

means for identifying the highest inner loop power control performance target value from among the resulting respective inner loop power control performance target values; and

means for using the identified highest inner loop power control performance target value as the inner loop power control performance target being provided.

- 5 20. Apparatus according to claim 19, further comprising:

means for determining that one of the resulting respective inner loop power control performance target values differs from the resulting respective inner loop power control performance target value of one or more of the other services by more than a predetermined threshold for more than a predetermined  
10 time;

means for adjusting, responsive thereto, rate matching parameters of one or more of the services to bring the differing respective inner loop power control performance target value closer to the resulting respective inner loop power control performance target values of the one or more other services.

15

21. Apparatus according to any of claims 13 to 20, wherein the inner loop power control performance target is a signal to interference ratio, SIR, target.

22. An element of a cellular radio communications system, comprising  
20 apparatus according to any of claims 13 to 21.

23. An element of a UMTS cellular radio communications system, comprising apparatus according to any of claims 13 to 21.

24. A method of providing an inner loop power control performance target substantially as hereinbefore described with reference to the accompanying drawings.
- 5 25. Apparatus for providing an inner loop power control performance target substantially as hereinbefore described with reference to the accompanying drawings.